Notice of Allowability	Application No.	Applicant(s)	
	10/621,491	YUN, SANG HO	
	Examiner	Art Unit	
	Rodney Amadiz	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *7/17/2003*.

2. ☒ The allowed claim(s) is/are *1-9*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Streit on December 9, 2005.

The application has been amended as follows:

Claim 7 has been amended to read as follows:

A method for detecting a RF signal of a liquid crystal display, by receiving a RF signal emitted from a pen input device and thus detecting a horizontal position and a vertical position when inputting by pen, the method comprising the steps of: receiving RF signals emitted from the pen input device through a plurality of gate lines and a plurality of source lines; **a plurality of gate lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device; a plurality of source lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device**; detecting RF signals corresponding to a horizontal position and a vertical position from the RF signals received through the plurality of source lines and the plurality of gate lines, respectively; and calculating the horizontal position and the vertical position from the detected RF signals.

Allowable Subject Matter

1. Claims 1-9 are allowed.

2. The following is a statement of reasons for the indication of allowable subject matter: Claims 1 and 7 discloses a plurality of gate lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device; a plurality of source lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device; a first signal detecting means for detecting a RF signal corresponding to a horizontal position from the RF signals received through the plurality of source lines; a second signal detecting means for detecting a RF signal corresponding to a vertical position from the RF signals received through the plurality of gate lines. This arrangement of having the source lines and gate lines receive RF signals emitted from a pen input device, while being driven by the LCD without the use of a digitizer was not found in any prior art.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner makes record of Tagawa (U.S. Patent 5,581,274) as the closest prior art. The Tagawa reference teaches a liquid crystal panel (Fig. 26, 1) with segment driver (3) and common driver (2). The Tagawa reference also teaches a plurality of gate lines (Fig. 26, Y1-Ym) driven by the common driver and a plurality of source lines (Fig. 26, X1-Xm) driven by the segment driver. The Tagawa reference also teaches an X-coordinate circuit (10), Y-coordinate circuit detection circuit (11) and a position detection control circuit (6). However, the Tagawa fails to teach a plurality of gate lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device; a plurality of source lines driven by the liquid crystal driving signal and at the same time receiving RF signals emitted from the pen input device. Examiner also makes record of the following references as pertinent to the applicant's disclosure:

Ise	U.S. Patent 5,283,556
Watanabe et al.	U.S. Patent 6,246,393
Iisaka et al.	U.S. Patent 2002/013557

However, none of the prior art teaches or suggests all of the limitations found in claims 1 and 7.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.A.
R.A.
12/9/05

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER